



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: van Rooijen *et al.*

Serial No.: 10/032,201

Filed: December 19, 2001

For: METHODS FOR THE PRODUCTION OF
MULTIMERIC PROTEINS, AND
RELATED COMPOSITIONS

CONFIRMATION NO: 4943

Art Unit: Unassigned

Examiner: Unassigned

CERTIFICATE OF MAILING BY "EXPRESS MAIL"

"Express Mail" Mailing Label Number

EL 870637842 US

Date of Deposit June 10, 2002

I hereby certify that this paper is being deposited
with the United States Postal "Express Mail Post
Office to Addressee" Service under 37 C.F.R.

§1.10 on the date indicated above and addressed
to:

Commissioner for Patents

U.S. Patent and Trademark Office

P.O. Box 2327

Arlington, VA 22202

06/10/02

Date


Kelly Fischer

TRANSMITTAL LETTER

Commissioner for Patents
U.S. Patent and Trademark Office
P.O. Box 2327
Arlington, VA 22202

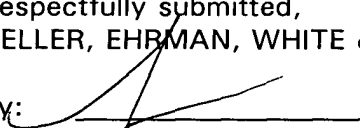
Dear Sir:

Responsive to the Notice to Comply With Requirements For Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures, mailed May 8, 2002, the following documents are transmitted herewith: a copy of the Notice to Comply and Sequence Listing Error Report, a Response to the Notice to Comply, paper and disk copies of the Substitute Sequence Listing, and a Verified Statement that the paper and computer readable copies of the Substitute Sequence Listing are the same.

- ☒ The Commissioner is hereby authorized to charge any fee, including any submitted herewith if an attached check(s) is in the wrong amount or otherwise improper or missing, that may be due in connection with this and the attached papers, or with this application during its entire pendency to or to credit any overpayment to Deposit Account No. 50-1213. A duplicate of this sheet is enclosed.

Respectfully submitted,
HELLER, EHRMAN, WHITE & McAULIFFE LLP

By:


Stephanie L. Seidman
Registration No. 33,779

Attorney Docket No. 38814-351B
Address all correspondence to:
HELLER, EHRMAN, WHITE & McAULIFFE LLP
4350 La Jolla Village Drive, 7th Floor
San Diego, California 92122-1246
Telephone: 858 450-8400
Facsimile: 858 587-5360
email:sseidman@HEWM.com



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/032,201	12/19/2001	Gijs Van Rooijen	38814-351B

Stephanie Seidman
HELLER EHRMAN WHITE & McAULIFFE LLP
Suite 700
4350 La Jolla Village Drive
San Diego, CA 92122-1246



RECEIVED

MAY 14 2002

Heller Ehrman

CONFIRMATION NO. 4943

FORMALITIES LETTER



OC000000008060526

Date Mailed: 05/08/2002

**NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS
CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE
DISCLOSURES**

Applicant is given **TWO MONTHS FROM THE DATE OF THIS NOTICE** within which to file the items indicated below to avoid abandonment. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

For questions regarding compliance to these requirements, please contact:

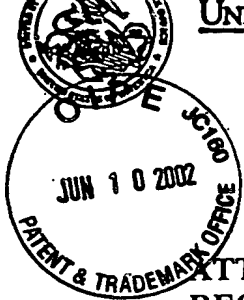
- For Rules Interpretation, call (703) 308-4216
- To Purchase PatentIn Software, call (703) 306-2600
- For PatentIn Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov

*A copy of this notice **MUST** be returned with the reply.*

Customer Service Center

Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE

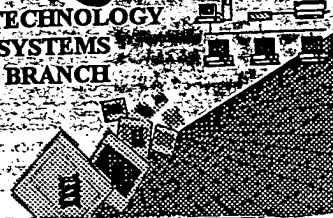
ATTACHMENT TO "NOTICE TO COMPLY WITH
REQUIREMENTS...SEQUENCE DISCLOSURES"

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be submitted using one of the following methods:

1. Electronically submitted through EFS-Bio
(<http://www.uspto.gov/ebs/efs/downloads/documents.htm>, EFS Submission User Manual - ePAVE)
2. Mailed to:
U.S. Patent and Trademark Office
Box Sequence, P.O. Box 2327
Arlington, VA 22202
3. Mailed by Federal Express, United Parcel Service or other delivery service to:
U. S. Patent and Trademark Office
2011 South Clark Place
Customer Window, Box Sequence
Crystal Plaza Two, Lobby, Room 1B03
Arlington, Virginia 22202
4. Hand Carried directly to the Customer Window at:
2011 South Clark Place
Crystal Plaza Two, Lobby, Room 1B03, Box Sequence,
Arlington, Virginia 22202



BIOTECHNOLOGY
SYSTEMS
BRANCH



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/032,201A
Source: OPE
Date Processed by STIC: 4/24/02

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

**TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER
VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:**

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebs/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name,
Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two,
2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office,
Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002



OIPE

Does Not Comply
Corrected Diskette Needed

See p. 6

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/032,201A

DATE: 04/24/2002
TIME: 10:57:50

Input Set : A:\351bseq.002
Output Set: N:\CRF3\04242002\J032201A.raw

3 <110> APPLICANT: Van Rooijen, Gijs
4 Deckers, Harm
5 Heifetz, Peter Bernard
6 Briggs, Steven
7 Dalmia, Bipin Kumar
8 Del Val, Greg
9 Zaplachinski, Steve
10 Moloney, Maurice
12 <120> TITLE OF INVENTION: METHODS FOR THE PRODUCTION OF MULTIMERIC PROTEINS, AND
ELATED
13 COMPOSITIONS
15 <130> FILE REFERENCE: 38814-351B
17 <140> CURRENT APPLICATION NUMBER: 10/032,201A
--> 18 <141> CURRENT FILING DATE: 2002-04-09
20 <160> NUMBER OF SEQ ID NOS: 313
22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 22
26 <212> TYPE: DNA
27 <213> ORGANISM: Artificial Sequence
29 <220> FEATURE:
30 <223> OTHER INFORMATION: Primer
32 <400> SEQUENCE: 1
33 taccatggct tcggaagaag ga 22
35 <210> SEQ ID NO: 2
36 <211> LENGTH: 22
37 <212> TYPE: DNA
38 <213> ORGANISM: Artificial Sequence
40 <220> FEATURE:
41 <223> OTHER INFORMATION: Primer
43 <400> SEQUENCE: 2
44 gaaagcttaa gccaaagtgtt tg 22
46 <210> SEQ ID NO: 3
47 <211> LENGTH: 36
48 <212> TYPE: DNA
49 <213> ORGANISM: Artificial Sequence
51 <220> FEATURE:
52 <223> OTHER INFORMATION: Primer
54 <400> SEQUENCE: 3
55 ggccagcaca ctaccatgaa tgggtctcgaa actcac 36
57 <210> SEQ ID NO: 4
58 <211> LENGTH: 28
59 <212> TYPE: DNA
60 <213> ORGANISM: Artificial Sequence



RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/032,201A

DATE: 04/24/2002
TIME: 10:57:50

Input Set : A:\351bseq.002
Output Set: N:\CRF3\04242002\J032201A.raw

```
62 <220> FEATURE:
63 <223> OTHER INFORMATION: Primer
65 <400> SEQUENCE: 4
66 ttaagcttca atcactctta ccttgctg 28
68 <210> SEQ ID NO: 5
69 <211> LENGTH: 72
70 <212> TYPE: DNA
71 <213> ORGANISM: Artificial Sequence
73 <220> FEATURE:
74 <223> OTHER INFORMATION: Primer
76 <400> SEQUENCE: 5
77 actggagatg ttgactcgac ggatactacg gattggtcga cggctatgga agaaggacaa 60
78 gtgatcgct gc 72
80 <210> SEQ ID NO: 6
81 <211> LENGTH: 80
82 <212> TYPE: DNA
83 <213> ORGANISM: Artificial Sequence
85 <220> FEATURE:
86 <223> OTHER INFORMATION: Primer
88 <400> SEQUENCE: 6
89 atccgctgag tcaacatctc cagtttctc ggtggtctcg ttagccttcg atccagcaat 60
90 ctcttgtaag aatgctctgc 80
92 <210> SEQ ID NO: 7
93 <211> LENGTH: 22
94 <212> TYPE: DNA
95 <213> ORGANISM: Artificial Sequence
97 <220> FEATURE:
98 <223> OTHER INFORMATION: Primer
100 <400> SEQUENCE: 7
101 gtggaagctt atggagatgg ag 22
103 <210> SEQ ID NO: 8
104 <211> LENGTH: 1002
105 <212> TYPE: DNA
106 <213> ORGANISM: Artificial Sequence
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Chimeric
111 <400> SEQUENCE: 8
112 atgaatggtc tcgaaactca caacacaagg ctctgtatcg taggaagtgg cccagcggca 60
113 cacacggcgg cgatttacgc agctagggtc gaacttaaac ctcttctctt cgaaggatgg 120
114 atggctaacg acatcgctcc cggtagtcaa ctaacaacca ccaccgacgt cgagaatttc 180
115 cccggatttc cagaaggat tctcggagta gagctcactg acaaattccg taaacaatcg 240
116 gagcgattcg gtactacgat atttacagag acggtgacga aagtcgattt ctcttcgaaa 300
117 ccgtttaagc tattcacaga ttcaaaagcc attctcgtcg acgctgtgat tctcgtact 360
118 ggagctgtgg ctaagcggct tagcttcgtt ggatctggtg aaggttcttg aggtttcttg 420
119 aaccgtggaa tctccgcttg tgctgtttgc gacggagctg ctccgatatt ccgtaacaaa 480
120 cctcttgccg tgatcggttg aggcgattca gcaatggaag aagcaaactt tcttacaaaa 540
121 tatggatcta aagtgtatat aatccatagg agagatgctt ttagagcgtc taagattatg 600
122 cagcagcgag ctttgtctaa tctaagatt gatgtgattt ggaactcgtc tgttgaggaa 660
123 gcttatggag atggagaaag agatgtgctt ggaggattga aagtgaagaa tgtggttacc 720
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/032,201A

DATE: 04/24/2002

TIME: 10:57:50

Input Set : A:\351bseq.002

Output Set: N:\CRF3\04242002\J032201A.raw

```
124 ggagatgttt ctgatttaaa agtttctgga ttgttctttg ctattggtca tgagccagct 780
125 accaagtttt tggatggtgg tgttgagtta gattcggatg gttatgttg cacaagcct 840
126 ggtactacac agactagcgt tcccggagtt ttcgctgcgg gtgatgttca ggataagaag 900
127 tataggcaag ccactactgc tgcaggaact ggggtgatgg cagctttgga tgcagagcat 960
128 tacttacaag agattggatc tcagcaaggt aagagtgatt ga 1002
130 <210> SEQ ID NO: 9
131 <211> LENGTH: 999
132 <212> TYPE: DNA
133 <213> ORGANISM: Arabidopsis thaliana
135 <400> SEQUENCE: 9
136 atgaatggtc tcgaaaactca caacacaagg ctctgtatcg taggaagtgg cccagcggca 60
137 cacacggcgg cgattttacgc agctagggct gaacttaaac ctcttctctt cgaaggatgg 120
138 atggctaacy acatcgctcc cgggtggtcaa ctcaaccaac caccgcgtga gaatttcccc 180
139 ggatttccag aagggtattct cggagtagag ctcaactgaca aattccgtaa acaatcggag 240
140 cgattcggta ctacgatatt tacagagacg gtgacgaaag tcgatttctc ttcgaaaccg 300
141 tttaagctat tcacagattc aaaagccatt ctgcgtgacg ctgtgattct cgctatcgga 360
142 gctgtggcta agtggtctag ctctgttgga tctgggtgaag ttctcggagg tttgtggaac 420
143 cgtggaatct ccgcttgtgc tgtttgcgac ggagctgctc cgatattccg caacaaacct 480
144 cttgcggtga tcggtggagg cgattctgca atggaagaag caaactttct taaaaatat 540
145 ggatctaaaag tgtatataat cgataggaga gatgctttta gacgctctaa gattatgcag 600
146 cagcgagctt tgtctaatcc taagattgat gtgatttga actcgtctgt tgtggaagct 660
147 tatggagatg gagaaagaga tgtgcttga ggattgaaag tgaagaatgt ggttaccgga 720
148 gatgtttctg atttaaaagt ttctggattg ttctttgcta ttggatcatga gccagctacc 780
149 aagtttttgg atggtggtgt tgagttagat tcggatgggt atgttgcac gaagcctgg 840
150 actacacaga ctacgcttcc cggagtttct gctgcgggtg atgttcagga taagaagtat 900
151 aggcaagcca tcaactgctgc aggaactggg tgcattggcag ctttggatgc agagcattac 960
152 ttacaagaga ttgatctca gcaaggtaag agtgattga 999
154 <210> SEQ ID NO: 10
155 <211> LENGTH: 1002
156 <212> TYPE: DNA
157 <213> ORGANISM: Artificial Sequence
159 <220> FEATURE:
160 <223> OTHER INFORMATION: Chimeric
--> 162 <221> NAME/KEY: CDS
163 <222> LOCATION: (1)...(1002)
164 <223> OTHER INFORMATION: cDNA encoding NADPH thioredoxin reductase
--> 166 <400> 10
167 atg aat ggt ctc gaa act cac aac aca agg ctc tgt atc gta gga agt 48
168 Met Asn Gly Leu Glu Thr His Asn Thr Arg Leu Cys Ile Val Gly Ser
169 1 5 10 15
171 ggc cca gcg gca cac acg gcg gcg att tac gca gct agg gct gaa ctt 96
172 Gly Pro Ala Ala His Thr Ala Ala Ile Tyr Ala Ala Arg Ala Glu Leu
173 20 25 30
175 aaa cct ctt ctc ttc gaa gga tgg atg gct aac gac atc gct ccc ggt 144
176 Lys Pro Leu Leu Phe Glu Gly Trp Met Ala Asn Asp Ile Ala Pro Gly
177 35 40 45
179 ggt caa cta aca acc acc acc gac gtc gag aat ttc ccc gga ttt cca 192
180 Gly Gln Leu Thr Thr Thr Thr Asp Val Glu Asn Phe Pro Gly Phe Pro
181 50 55 60
```

Input Set : A:\351bseq.002
Output Set: N:\CRF3\04242002\J032201A.raw

183	gaa ggt att ctc gga gta gag ctc act gac aaa ttc cgt aaa caa tcg	240
184	Glu Gly Ile Leu Gly Val Glu Leu Thr Asp Lys Phe Arg Lys Gln Ser	
185	65 70 75 80	
187	gag cga ttc ggt act acg ata ttt aca gag acg gtg acg aaa gtc gat	288
188	Glu Arg Phe Gly Thr Ile Phe Thr Glu Thr Val Thr Lys Val Asp	
189	85 90 95	
191	ttc tct tcg aaa ccg ttt aag cta ttc aca gat tca aaa gcc att ctc	336
192	Phe Ser Ser Lys Pro Phe Lys Leu Phe Thr Asp Ser Lys Ala Ile Leu	
193	100 105 110	
195	gct gac gct gtg att ctc gct act gga gct gtg gct aag cgg ctt agc	384
196	Ala Asp Ala Val Ile Leu Ala Thr Gly Ala Val Ala Lys Arg Leu Ser	
197	115 120 125	
199	ttc gtt gga tct ggt gaa ggt tct gga ggt ttc tgg aac cgt gga atc	432
200	Phe Val Gly Ser Gly Glu Gly Ser Gly Gly Phe Trp Asn Arg Gly Ile	
201	130 135 140	
203	tcc gct tgt gct gtt tgc gac gga gct gct ccg ata ttc cgt aac aaa	480
204	Ser Ala Cys Ala Val Cys Asp Gly Ala Ala Pro Ile Phe Arg Asn Lys	
205	145 150 155 160	
207	cct ctt gcg gtg atc ggt gga ggc gat tca gca atg gaa gaa gca aac	528
208	Pro Leu Ala Val Ile Gly Gly Gly Asp Ser Ala Met Glu Glu Ala Asn	
209	165 170 175	
211	ttt ctt aca aaa tat gga tct aaa gtg tat ata atc cat agg aga gat	576
212	Phe Leu Thr Lys Tyr Gly Ser Lys Val Tyr Ile Ile His Arg Arg Asp	
213	180 185 190	
215	gct ttt aga gcg tct aag att atg cag cag cga gct ttg tct aat cct	624
216	Ala Phe Arg Ala Ser Lys Ile Met Gln Gln Arg Ala Leu Ser Asn Pro	
217	195 200 205	
219	aag att gat gtg att tgg aac tcg tct gtt gtg gaa gct tat gga gat	672
220	Lys Ile Asp Val Ile Trp Asn Ser Ser Val Val Glu Ala Tyr Gly Asp	
221	210 215 220	
223	gga gaa aga gat gtg ctt gga gga ttg aaa gtg aag aat gtg gtt acc	720
224	Gly Glu Arg Asp Val Leu Gly Gly Leu Lys Val Lys Asn Val Val Thr	
225	225 230 235 240	
227	gga gat gtt tct gat tta aaa gtt tct gga ttg ttc ttt gct att ggt	768
228	Gly Asp Val Ser Asp Leu Lys Val Ser Gly Leu Phe Phe Ala Ile Gly	
229	245 250 255	
231	cat gag cca gct acc aag ttt ttg gat ggt ggt gtt gag tta gat tcg	816
232	His Glu Pro Ala Thr Lys Phe Leu Asp Gly Gly Val Glu Leu Asp Ser	
233	260 265 270	
235	gat ggt tat gtt gtc acg aag cct ggt act aca cag act agc gtt ccc	864
236	Asp Gly Tyr Val Val Thr Lys Pro Gly Thr Thr Gln Thr Ser Val Pro	
237	275 280 285	
239	gga gtt ttc gct gcg ggt gat gtt cag gat aag aag tat agg caa gcc	912
240	Gly Val Phe Ala Ala Gly Asp Val Gln Asp Lys Lys Tyr Arg Gln Ala	
241	290 295 300	
243	atc act gct gca gga act ggg tgc atg gca gct ttg gat gca gag cat	960
244	Ile Thr Ala Ala Gly Thr Gly Cys Met Ala Ala Leu Asp Ala Glu His	
245	305 310 315 320	
247	tac tta caa gag att gga tct cag caa ggt aag agt gat tga	1002

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/032,201A

DATE: 04/24/2002

TIME: 10:57:50

Input Set : A:\351bseq.002

Output Set: N:\CRF3\04242002\J032201A.raw

248 Tyr Leu Gln Glu Ile Gly Ser Gln Gln Gly Lys Ser Asp *
249 325 330
253 <210> SEQ ID NO: 11
254 <211> LENGTH: 333
255 <212> TYPE: PRT
256 <213> ORGANISM: Artificial Sequence
258 <220> FEATURE:
259 <223> OTHER INFORMATION: Chimeric
261 <400> SEQUENCE: 11
262 Met Asn Gly Leu Glu Thr His Asn Thr Arg Leu Cys Ile Val Gly Ser
263 1 5 10 15
264 Gly Pro Ala Ala His Thr Ala Ala Ile Tyr Ala Ala Arg Ala Glu Leu
265 20 25 30
266 Lys Pro Leu Leu Phe Glu Gly Trp Met Ala Asn Asp Ile Ala Pro Gly
267 35 40 45
268 Gly Gln Leu Thr Thr Thr Thr Asp Val Glu Asn Phe Pro Gly Phe Pro
269 50 55 60
270 Glu Gly Ile Leu Gly Val Glu Leu Thr Asp Lys Phe Arg Lys Gln Ser
271 65 70 75 80
272 Glu Arg Phe Gly Thr Thr Ile Phe Thr Glu Thr Val Thr Lys Val Asp
273 85 90 95
274 Phe Ser Ser Lys Pro Phe Lys Leu Phe Thr Asp Ser Lys Ala Ile Leu
275 100 105 110
276 Ala Asp Ala Val Ile Leu Ala Thr Gly Ala Val Ala Lys Arg Leu Ser
277 115 120 125
278 Phe Val Gly Ser Gly Glu Gly Ser Gly Gly Phe Trp Asn Arg Gly Ile
279 130 135 140
280 Ser Ala Cys Ala Val Cys Asp Gly Ala Ala Pro Ile Phe Arg Asn Lys
281 145 150 155 160
282 Pro Leu Ala Val Ile Gly Gly Gly Asp Ser Ala Met Glu Glu Ala Asn
283 165 170 175
284 Phe Leu Thr Lys Tyr Gly Ser Lys Val Tyr Ile Ile His Arg Arg Asp
285 180 185 190
286 Ala Phe Arg Ala Ser Lys Ile Met Gln Gln Arg Ala Leu Ser Asn Pro
287 195 200 205
288 Lys Ile Asp Val Ile Trp Asn Ser Ser Val Val Glu Ala Tyr Gly Asp
289 210 215 220
290 Gly Glu Arg Asp Val Leu Gly Gly Leu Lys Val Lys Asn Val Val Thr
291 225 230 235 240
292 Gly Asp Val Ser Asp Leu Lys Val Ser Gly Leu Phe Phe Ala Ile Gly
293 245 250 255
294 His Glu Pro Ala Thr Lys Phe Leu Asp Gly Gly Val Glu Leu Asp Ser
295 260 265 270
296 Asp Gly Tyr Val Val Thr Lys Pro Gly Thr Thr Gln Thr Ser Val Pro
297 275 280 285
298 Gly Val Phe Ala Ala Gly Asp Val Gln Asp Lys Lys Tyr Arg Gln Ala
299 290 295 300
300 Ile Thr Ala Ala Gly Thr Gly Cys Met Ala Ala Leu Asp Ala Glu His
301 305 310 315 320

Input Set : A:\351bseq.002
Output Set: N:\CRF3\04242002\J032201A.raw

lease Note:

se of n and/or Xaa have been detected in the Sequence Listing. Please review the
equence Listing to ensure that a corresponding explanation is presented in the <220>
o <223> fields of each sequence which presents at least one n or Xaa.

eq#:101; Xaa Pos. 16,17,38,42,45,54,55,58,66,72,75,79,80,81,94,99,103
eq#:109; Xaa Pos. 17,38,42,55,58,60,72,107
eq#:134; Xaa Pos. 21,35
eq#:245; Xaa Pos. 33,45,46
eq#:275; Xaa Pos. 9,11
eq#:287; Xaa Pos. 524
eq#:288; Xaa Pos. 666
eq#:290; Xaa Pos. 523
eq#:293; Xaa Pos. 520
eq#:294; Xaa Pos. 578
eq#:295; Xaa Pos. 523
eq#:296; Xaa Pos. 576
eq#:300; Xaa Pos. 612
eq#:303; Xaa Pos. 523
eq#:304; Xaa Pos. 527
eq#:307; Xaa Pos. 497
eq#:309; Xaa Pos. 497
eq#:312; Xaa Pos. 525
eq#:313; Xaa Pos. 498

se of <220> Feature(NEW RULES):

equene(s) are missing the <220> Feature and associated headings.

se of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence"
r"Unknown". Please explain source of genetic material in <220> to <223>
ection (See "Federal Register," 6/01/98, Vol. 63, No. 104, pp.29631-32)
Sec.1.823 of new Rules)

eq#:10(16) 17,18,19,22,24,27,30,33,34,35

VERIFICATION SUMMARY
PATENT APPLICATION: US/10/032,201A

DATE: 04/24/2002
TIME: 10:57:51

Input Set : A:\351bseq.002
Output Set: N:\CRF3\04242002\J032201A.raw

:18 M:271 C: Current Filing Date differs, Replaced Current Filing Date
:162 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
:166 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:10
:538 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
:541 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:16
:544 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:16
:680 M:258 W: Mandatory Feature missing, <220> FEATURE:
:680 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
:704 M:258 W: Mandatory Feature missing, <220> FEATURE:
:704 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
:737 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
:740 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:19
:743 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:19
:856 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
:945 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
:948 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:22
:1151 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:24
:1434 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
:1437 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:27
:1440 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:27
:1729 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:30
:2066 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:33
:2297 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:34
:2330 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:35
:2334 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:35
:2340 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:35
:4706 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101 after pos.:0
:4708 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101 after pos.:16
:4710 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101 after pos.:32
:4712 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101 after pos.:48
:4714 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101 after pos.:64
:4716 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101 after pos.:80
:4718 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101 after pos.:96
:4895 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109 after pos.:16
:4897 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109 after pos.:32
:4899 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109 after pos.:48
:4901 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109 after pos.:64
:4905 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109 after pos.:96
:5488 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:134 after pos.:16
:5490 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:134 after pos.:32
:9690 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:245 after pos.:32
:11041 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:275 after pos.:0
:11598 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:287 after pos.:512
:11695 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:288 after pos.:656
:11848 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:290 after pos.:512
:12071 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:293 after pos.:512
:12158 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:294 after pos.:576
:12237 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:295 after pos.:512

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/032,201A

DATE: 04/24/2002

TIME: 10:57:51

Input Set : A:\351bseq.002

Output Set: N:\CRF3\04242002\J032201A.raw

:12322 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:296 after pos.:560
 :12637 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:300 after pos.:608
 :12850 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:303 after pos.:512
 :12929 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:304 after pos.:512
 :13152 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:307 after pos.:496
 :13259 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:309 after pos.:496
 :13418 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:312 after pos.:512
 :13495 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:313 after pos.:496